



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,463	02/14/2004	Tung-Ming Hsieh	GP-304360	5557

7590

08/14/2006

Leslie Hodges  
General Motors Corporation, Legal Staff  
Mail Code: 482-C23-B21, P.O. Box 300  
Detroit, MI 48265-3000

EXAMINER
----------

LUU, MATTHEW

ART UNIT	PAPER NUMBER
----------	--------------

3663

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/779,463	<b>Applicant(s)</b> HSIEH ET AL.	
	<b>Examiner</b> LUU MATTHEW	<b>Art Unit</b> 3663	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crombez (6,278,916).

Regarding claims 1, 4 and 16, Crombez discloses (Fig. 1) a method for establishing an output torque control term in a powertrain control comprising:

providing a first output torque contribution term corresponding to a first torque request signal (throttle request 20);

reducing or attenuating the first output torque contribution term (20) in accordance with a predetermined factor (torque limiting factors 18) to produce the throttle torque request (38) (Fig. 2, steps 44, 46, 54 and 58) (Column 4, lines 29-39; and column 6, lines 14-25);

providing at least one other brake torque contribution term (Fig. 1, brake torque request from brake pedal 26); and

combining the reduced first output torque contribution term (38) with the brake torque contribution term (26) into a resultant output torque control term (motor torque 28) (Fig. 3, steps 68; and column 6, lines 32-47).

The only difference between the disclosure of Crombez and the claimed invention is that claims 1 and 16 require “a predetermined factor”, instead of the “limit factors” as disclosed by Crombez.

However, It would have been obvious to a person of ordinary skill in the art to recognize that the “limit” is pre-set or predetermined to a certain boundary or threshold. Therefore, the “limit factor” is equivalent to the “predetermined factor”.

### ***Claim Rejections - 35 USC § 103***

Claims 2-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crombez as applied to claims 1 and 16 above, and further in view of Russell et al (US 2001/0008988).

Regarding claim 2, Crombez does not explicitly teach the predetermined factor is a function of the first torque request.

However, Russel discloses (Fig. 5) a predetermined factor  $AT_{des} / A_t$  is a function (SIGN function) of the first torque request (desired engine torque) (Sections 36-40).

Art Unit: 3663

Therefore, it would have been obvious to the person of ordinary skill in the art to incorporate the predetermined factor of Russel into the method for controlling an output torque of Crombez to calculate the desired throttle output torque.

Furthermore, Crombez also teaches (Fig. 2, steps 88, 90 and 92) wherein the "limit" factor is a function of the first torque request (the function of the limit factor is to attenuate the first torque request and correct the motor torque errors) (Column 6, lines 19-24; and column 7, lines 6-9).

Regarding claim 3, Russel also teaches the predetermined factor can also be a function of a brake torque (Section 36, line 7).

Furthermore, Crombez further teaches wherein the limit factor is a function of a second torque request signal (brake torque) (Column 7, lines 23-39).

Regarding claim 5, note the rejection as set forth above with respect to claims 2 and 3.

### ***Claim Rejections - 35 USC § 103***

Claims 6, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crombez as applied to claims 1, 4 and 16 above, and further in view of Yamanura et al (6,058,347) and Fukumura et al (6,161,641).

Regarding claims 6, 17 and 18, Crombez fails to teach the predetermined factor generally a) trends in one direction as throttle request trends larger and b) trends in an opposite direction as brake request trends larger.

However, Yamamura discloses for controlling the target throttle opening in according with the brake pedal operation, wherein the decrease (reduce) rate of the target throttle opening to close the throttle according to the estimated drive shaft torque decrease rate by applying a gain  $K_{th}$  = gain of engine torque relative to throttle opening (Column 8, lines 46-56). Yamamura also discloses the decreased (reduced) target throttle opening is according to a variation rate of the degree of brake pedal depression (Column 2, lines 34-35).

Therefore, it would have been obvious to the person of ordinary skill in the art to incorporate the teachings of decrease the throttle request by increasing the brake request since this is well-known in the art as disclosed by Fukumura et al (6,161,641) (Fig. 4).

### ***Answer to Arguments With Traverse***

Applicant's election with traverse of invention I now includes claims 1-6 and 16-18 in the reply filed on June 8, 2006 is acknowledged. The traversal is on the ground(s) that the method of invention I can not be separate from the apparatus invention III. This is not found persuasive because inventions II and III are related as process and

Art Unit: 3663

apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another and materially different apparatus such as an anti-skid braking system. Furthermore, it is well known in the art in any vehicle braking system, when the brake torque is increasing, the throttle torque will decrease. The anti-skid braking system is only an example to show that the process as claimed can be practiced by another and materially different apparatus, but it is not intended to read on the claimed limitation. For the rejections that read on the claimed limitations, please note the rejections as set forth above.

In response to applicant's argument that the anti-skid braking system fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., sections [0004] and [0006]) are not recited in the anti-skid braking system). Applicant should notes that limitations from the specification cannot read into the claims.

Claims 7-9 and 10-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention III, there being no allowable generic or linking claim.

The requirement is still deemed proper and is therefore made FINAL.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Suzuki (US 2004/0162187) discloses a brake control apparatus.

-Maier-Landgrebe (6,182,003) discloses a process and device for setting a driving torque.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUU MATTHEW whose telephone number is (571) 272-7663. The examiner can normally be reached on Flexible Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JACK KEITH can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M. Luu

A handwritten signature in black ink, appearing to read 'Matthew Luu', with a stylized flourish at the end.

**MATTHEW LUU**  
**PRIMARY EXAMINER**